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NATIONAL TELECOMMUNICATIONS COOPERATIVE ASSOCIATION
The Voice of Rural Telecommunications
www.ntca.org

NTCA 2006 BROADBAND/INTERNET AVAILABILITY SURVEY REPORT

August 2006

DISCLAIMER: Data from the survey has been presented as reported.

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EXECUTIVE SUMMARY

For the last eight years, the National Telecommunications Cooperative Association (NTCA) has conducted its annual Broadband/Internet Availability Survey to gauge the deployment rates of advanced services by its member companies.[1] In the late spring of 2006, NTCA sent an electronic survey form to each of the companies in NTCA's membership database; 120 members (21%) responded.

One hundred percent of the 2006 survey respondents offer broadband to some part of their customer base, up from 96% in the 2005 survey and a dramatic increase from the 58% of the 2000 survey respondents who offered broadband. Respondents indicated that they use a variety of technologies to provide broadband to their customers: 98% of those who offer broadband utilize digital subscriber line (DSL), 28% fiber to the home (FTTH) or fiber to the curb (FTTC), 22% unlicensed wireless, 15% satellite and 13% licensed wireless. Only 29% of 1999 survey respondents offered DSL service, and none offered wireless broadband.

Dial-up connection to the Internet at 56 kilobits per second (kbps) is available to 100% of respondents' customers. Eighty-eight percent can receive 200 to 500 kbps service, 88% 1 megabit per second (Mbps; up from 72% a year ago) and 39% 3 Mbps (up from 31%). On average, 19% of respondents' customers subscribe to 56 kbps service (down from 21% last year), 15% subscribe to 200 kbps to 500 kbps service (up from 12%), 6% to 1 Mbps (up from 5%) and 4% to 3 Mbps offerings (unchanged). Overall, dial-up take rates declined and broadband take rates rose slightly in the past year.

The typical respondent is 125 miles from their primary Internet connection. Thirty-eight percent of respondents have access to only one provider for reaching the Internet backbone, 19% have two providers from which to choose, 15% have three and 27% four or more. Seventy-four percent of respondents indicated they are generally satisfied with their current backbone access provider, while 8% are generally dissatisfied.

Eighty-six percent of survey respondents indicated they face competition in the provision of advanced services from at least one other service provider, virtually unchanged from 85% a year ago. By comparison, only 66% of respondents to the 2003 survey indicated they faced competition and only 43% in the 1999 survey. Current competitors include national Internet service providers (ISPs), satellite broadband providers, cable companies and electric utilities. Respondents are taking numerous marketing steps to increase

[1] Following the completion of the 2001 survey in December 2001, it was decided that subsequent Broadband/Internet Availability Surveys would be conducted in the first half of the year in order to capture year-end data. Consequently, no survey was conducted and no survey report published in calendar year 2002.

broadband take rates, including free customer premise equipment installation, price promotions, bundling of services, free hardware and free software. Nearly one-half of respondents find it difficult to compete with price promotions offered by competitors. Only 6% of survey respondents consider their company's marketing efforts to be "very successful."

Fifty-five percent of those respondents with a short-term fiber deployment strategy plan to offer fiber to the node to more than 75% of their customers by year-end 2006, while 30% plan to offer fiber to the home to at least 25% of their customers over the same time frame. Deployment cost remains the most significant barrier to wide deployment of fiber, followed by regulatory uncertainty, long loops, obtaining cost-effective equipment and low customer demand. Throughout the history of the survey, low demand has been a declining concern, while deployment cost has steadily grown.

Three percent of respondents currently offer VoIP service, approximately the same level as last year. Seventy-one percent of respondents have plans to offer VoIP in the foreseeable future. Five percent have providers offering, or planning to offer broadband over power lines (BPL) within their service area. Fifty-eight percent of respondents offer video service to their customers, up from 42% last year. Fifty-eight percent of those respondents offering video offer cable TV, 26% Internet protocol television (IPTV) and 14% direct broadcast satellite (DBS).

Eighty-six percent of survey respondents classified the process of obtaining financing for broadband projects as fairly to moderately easy, unchanged from last year.

INTRODUCTION

In the late spring of 2006, NTCA surveyed its members on their activities in the areas of providing broadband services and Internet availability to their members/customers. NTCA is a national association of approximately 570 local exchange carriers in 44 states that provide service primarily in rural areas. All NTCA members are small carriers that are "rural telephone companies" as defined in the Telecommunications Act of 1996 ("Act"). While some offer local exchange service to as few as 44 lines and a small handful to 90,000 or more, nearly 50% of NTCA members serve between 1,000 and 5,000 lines. Population density in most member service areas is in the 1 to 5 customers per square mile range. Approximately half of NTCA's members are organized as cooperatives and the other half are commercial companies.

This latest broadband survey is a follow-up to similar surveys conducted in recent years by NTCA, and seeks to build upon the results of those surveys.[2] This year's survey asked about technologies used to provide broadband service, broadband availability and subscription rates, prices charged, quantity and type of competition, broadband marketing efforts, fiber deployment, emerging technologies, Internet backbone connections, finance and availability of capital, and also provided an opportunity for respondents to provide specific comments they wished to share.

OVERVIEW OF SURVEY

The 2006 NTCA Broadband/Internet Availability Survey was conducted online. Member companies were provided with a URL through which they could access the survey. Every effort was made to minimize the reporting burden on the survey respondents.

The survey itself was organized into nine sections. The first section was comprised of general questions about the respondent's current operations and future plans. The second section dealt with the Internet backbone; the third, competition and marketing; the fourth, fiber deployment; the fifth, VoIP; the sixth, BPL; the seventh, video; the eighth; finance/availability of capital; and the ninth, an opportunity for respondents to offer any miscellaneous thoughts.

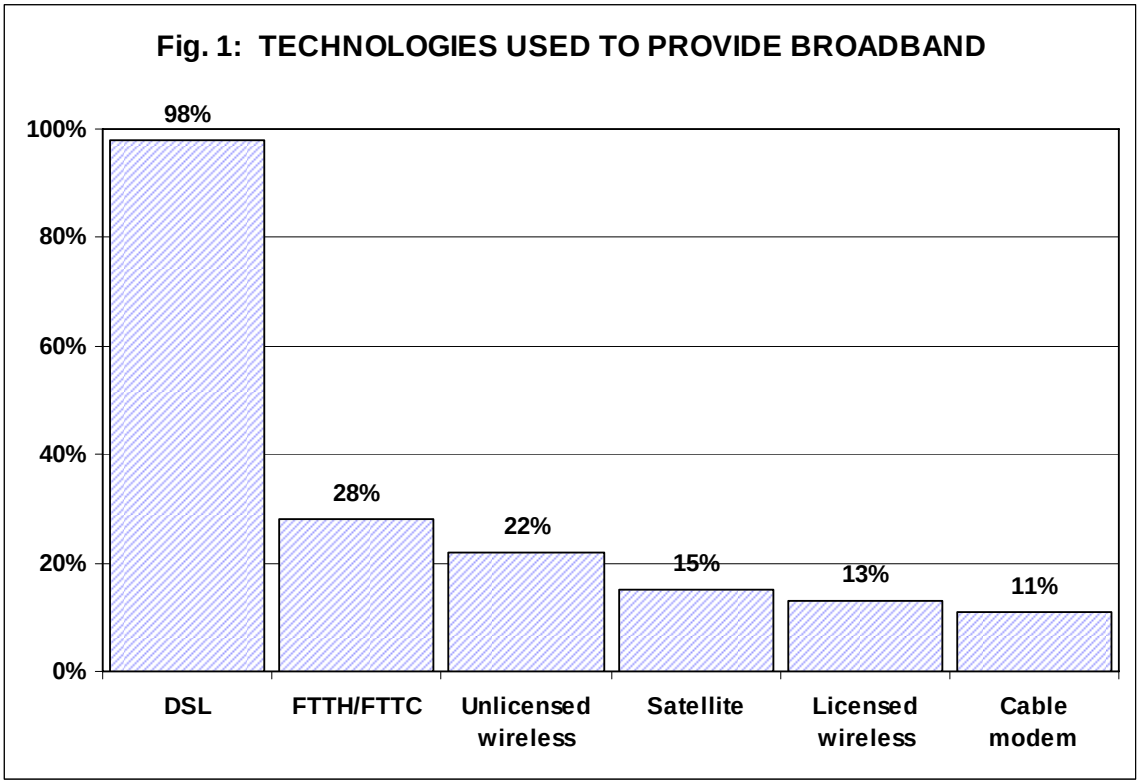
[2] Copies of this and previous NTCA survey reports may be downloaded from the NTCA Web site, www.ntca.org.

SURVEY RESULTS

The survey URL was distributed via e-mail and fax to all member companies in NTCA's database. The message contained instructions for online access to the survey. Responses were received from 120 member companies, a 21% response rate[3].

The average survey respondent serves 6,695 residential and 1,960 business lines; a few large companies skew these numbers upward, hence the median respondent serves 3,513 residential and 903 business lines. One hundred percent of survey respondents offer broadband[4] service to some part of their customer base. Respondents indicated that they use a variety of technologies to serve their customers: 98% utilize DSL, 28% FTTH or FTTC, 22% unlicensed wireless, 15% satellite, and 13% licensed wireless and 11% cable modem.[5] (See Figure 1.)

Fig. 1: TECHNOLOGIES USED TO PROVIDE BROADBAND



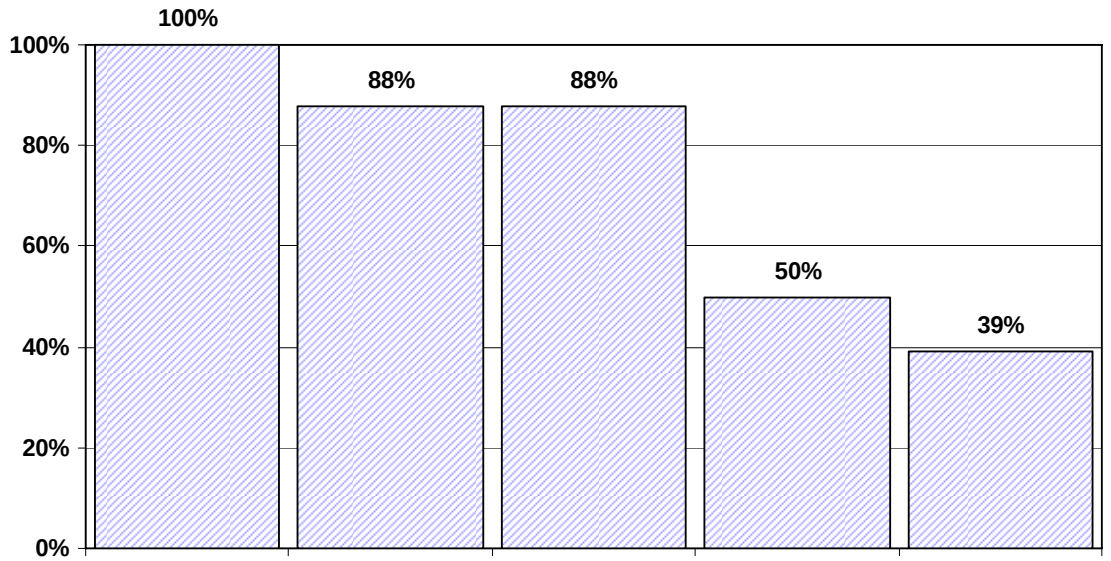
A vast majority (84%) of survey respondents are utilizing fiber fed nodes to extend the reach of DSL. Forty-six percent indicated that the average distance from the digital loop

[3] Based on the sample size, results of this survey can be assumed to be accurate to within ± 8% at the 95% confidence level.
[4] For the purpose of this survey, broadband is defined as throughput of 200 kbps in one direction.
[5] Percentages sum to greater than 100% as some respondents utilize more than one technology to serve their customers.

carrier (DLC) to the end user was between 15 and 18 thousand feet (kft), 26% between 9 and 15 kft, 19% greater than 18 kft and 10% 9 kft or less.

Dial-up connection to the Internet at fifty-six kbps is available to 100% of respondents' customers. Eighty-eight percent can subscribe to 200 kbps to 500 kbps service, 88% to 1 megabit per second (Mbps), 50% to 3 Mbps and 39% to greater than 3 Mbps service. (See Figure 2.)

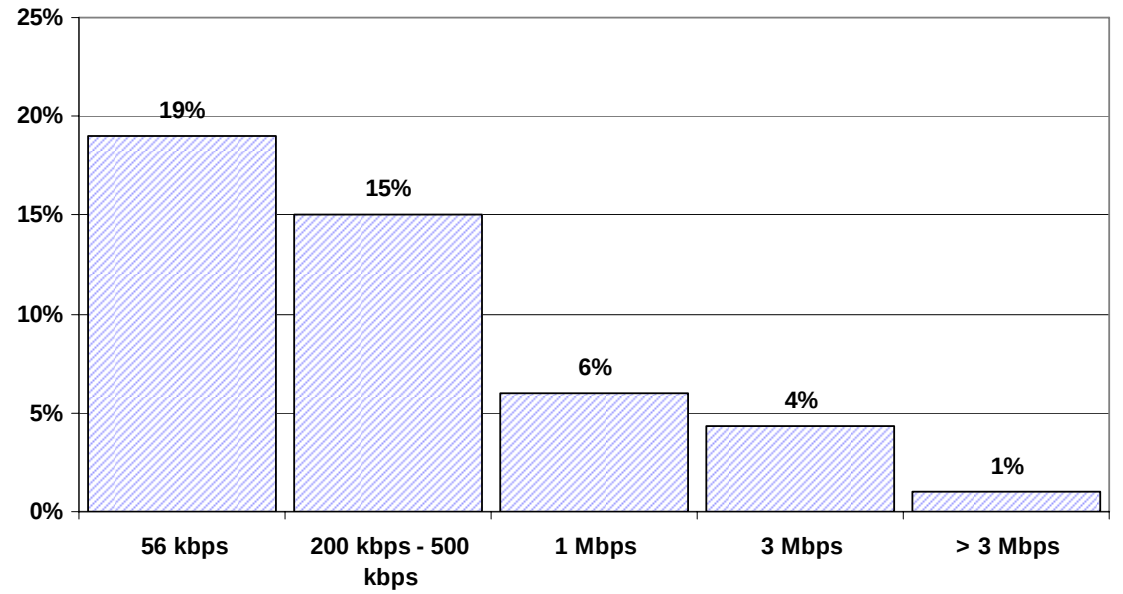
Fig. 2: AVAILABILITY OF DIAL-UP AND BROADBAND SERVICE



On average, 19% of respondents' residential customers subscribe to their 56 kbps service, 15% subscribes to 200 kbps to 500 kbps service, and 6% subscribes to 1 Mbps service, 4% to 3 Mbps service and approximately 1% to greater than 3 Mbps service.[6] (See Figure 3.) Typical prices charged range from $17.95 to $19.95 per month for unlimited dial-up service, to $34.95 to $49.95 for cable modem service, $34.95 to $44.95 per month for DSL service, and $39.95 to $54.95 for wireless broadband service.

[6] Actual rural broadband subscription rates may be significantly higher than the numbers shown here, as survey respondents are joined by a wide variety of competitors in the provision of broadband services within their service area.

Fig. 3: RESIDENTIAL DIAL-UP AND BROADBAND TAKE RATES
(Service taken from survey respondents only)



Twenty-seven percent of survey respondents currently utilize wireless broadband as a means of supplementing DSL—in other words, they utilize wireless technology as a means of reaching unserved broadband customers in areas where DSL deployment is not technically feasible. An additional 33% indicated they are considering doing so.

Twenty-nine percent of survey respondents indicated they offer their customers so-called "naked DSL"—DSL service without a voice component. Take rates for naked DSL service are extremely low.

Survey respondents have come to view the provision of broadband as a crucial part of their operations. Eighty-five percent consider broadband deployment very important for their company's bottom line, while 12% consider it somewhat important. With respect to respondents' standing in the community as the telecommunications provider of choice, 94% consider broadband deployment very important and 6% somewhat important.

Internet Backbone

The typical respondent is 125 miles from their primary Internet connection. Thirty-eight percent of respondents have access to only one provider for reaching the Internet backbone; 19% have two providers from which to choose, 15% have three and 27% four or more.

Eighty-one percent of those respondents who have recently switched Internet backbone access providers did so for price reasons, 55% due to quality of service concerns and 13% switched for other reasons, such as avoiding transport costs or obtaining diverse routing.[7] Seventy-four percent of respondents indicated they are generally satisfied with their current backbone access provider, while 8% are generally dissatisfied.

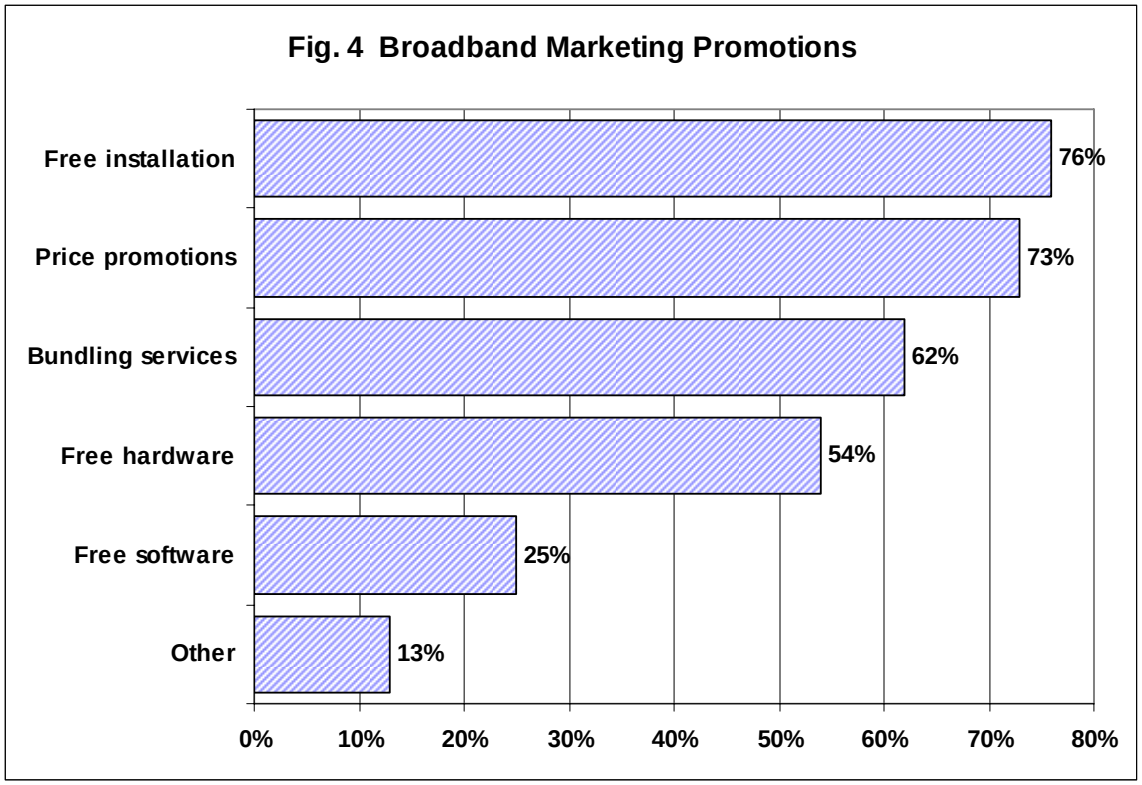
Competition/Marketing

Competition in broadband is becoming more prevalent and more varied: 86% of survey respondents indicated that they face competition from at least one other service provider for at least some of their customers. The typical respondent competes with three national ISPs, two satellite broadband providers, two electric utilities and one Cable Company. Other competitors mentioned include wireless providers, local ISPs and neighboring cooperatives. Sixty-three percent of those respondents facing competition indicated that their competitors were serving only the cities and towns in their service areas, while 37% said that competitors were serving customers throughout their service area.

The prospect of cable companies developing the capability to offer voice service is causing respondents some discomfort. Fifty percent of respondents are very concerned, while 21% are somewhat concerned.

Rural ILECs are taking numerous steps in the marketing arena to increase broadband take rates. Seventy-six percent are offering free customer premises equipment (CPE) installation, 73% of survey respondents' companies are offering price promotions, 62% are bundling services, 54% are offering free hardware, 25% offer free software and 13% are offering other promotions, such as a free month of service.[8] (See Figure 4.) Forty-nine percent of respondents find it difficult to compete with price promotions offered by competitors, while 33% struggle to match competitors' service bundling. Overall, 6% rate their company's marketing efforts as very successful, while 50% rate them as moderately successful.

[7] Totals exceed 100% as respondents were allowed to select more than one reason for switching providers.
[8] Totals exceed 100% as respondents' companies may be offering more than one marketing promotion.

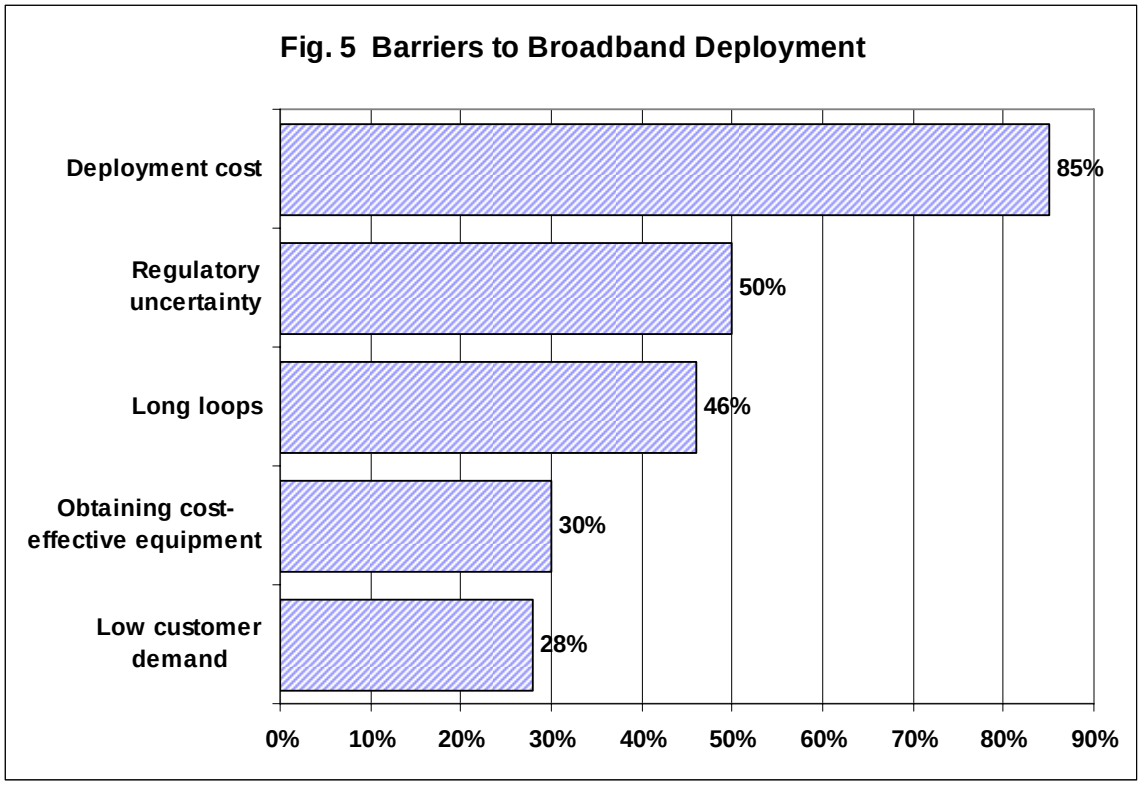


Fiber Deployment

Survey respondents indicated that their companies have some plans to deploy FTTC and FTTH to their customers. Fifty-five percent of survey respondents with a short-term fiber deployment strategy expect to offer fiber to the node to more than 75% of their customers by the end of 2006, 67% plan to provide FTTC and 30% plan to offer FTTH to at least 25% of their customers. Sixty-four percent of respondents plan to offer fiber to the node to more than 75% of their customers by year-end 2008; 23% and 9%, respectively; plan to offer FTTC and FTTH to that same percentage of their customers.

Eighty-five percent of survey respondents identified the cost of fiber deployment as a significant barrier to widespread deployment. Regulatory uncertainty was the number two barrier (50%), followed by long loops (46%); obtaining cost-effective equipment (30%) and low customer demand (28%).[9] (See Figure 5.)

[9] Totals exceed 100% as respondents were allowed to select more than one barrier.



Seventy percent of survey respondents see modest to significant benefits to fiber deployment versus the current cost of deployment; 87% expect to see modest to significant benefits versus the cost of deployment three years from now.

VoIP

Three percent of survey respondents currently offer VoIP service to their customers, down slightly from 4% one year ago. Seventy-one percent of respondents have plans to offer VoIP service in the foreseeable future. Thirty-seven percent of respondents perceive VoIP to pose a significant threat to their current operations, while 50% perceive VoIP as a moderate threat, both approximately the same as last year.

BPL

Five percent of survey respondents have providers offering, or planning to offer, BPL service within their service area, unchanged from last year. Five percent perceive BPL to pose a serious threat to their operations (down from 10% last year and 22% two years ago), while 38% perceive BPL as a moderate threat (down from 43% last year).

Video

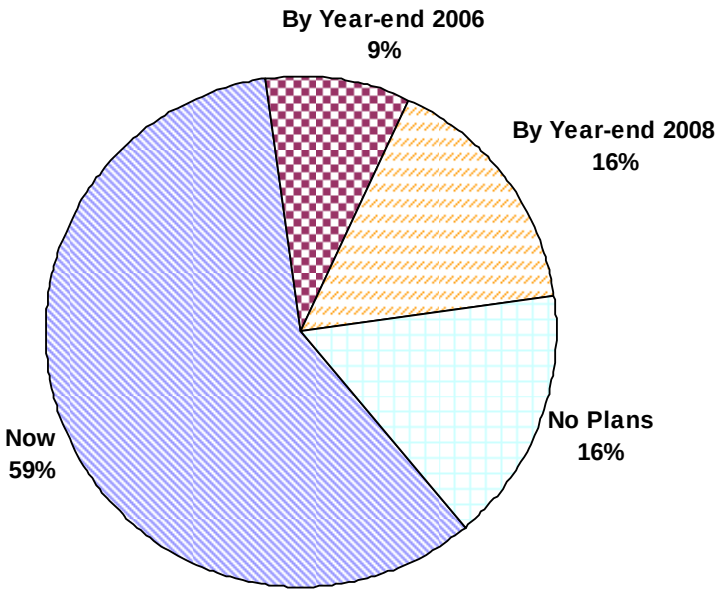
Fifty-nine percent of survey respondents offer video service to their customers. Ninety-four percent of those offer video under a cable franchise, while 1% offers video as an Open Video System (OVS) pursuant to Part 76, Subpart S of the Telecommunications Act of 1996. Fifty-eight percent of those respondents offering video offer cable TV, 26% IPTV and 14% direct broadcast satellite (DBS).

Of those respondents not currently offering video, 23% (9% of all respondents) plan to do so by year-end 2006, and 38% (16% of all respondents) expect to do so by year-end 2008. The remaining 38% currently have no plans to offer video service. (See Figure 6.)

Finance/Availability of Capital

Eighty-six percent of survey respondents classified the process of obtaining financing for broadband projects as fairly to moderately easy, unchanged from 2005.

Fig. 6: OFFERING VIDEO SERVICE?



Miscellaneous

Survey respondents were asked what specific actions—on the part of the FCC, state regulators, etc.—would enable an accelerated pace of broadband deployment in the respondents service area. Their responses are presented in Appendix A of this report.

CONCLUSIONS

Broadband take rates continue their slow, but steady climb. Fifteen percent of respondents' customers are taking 200 kpbs to 500 kbps service, up from 12% in 2005—representing one-year growth of 25%. Throughout the time NTCA has conducted this survey, broadband availability has far exceeded take rates. With the continuing passage of time, respondents are seeing their efforts rewarded.

Survey respondents have relatively little choice in selecting an Internet backbone access provider. Despite the fact that the average survey respondent already traverses more than 125 miles to reach its primary Internet backbone connection, 57% of survey respondents indicated they have access to only two or fewer Internet backbone providers. Since access to reliable and reasonably priced access to the backbone is critical to a telco's ability to offer their customers high-quality broadband service, this dearth of choices threatens the rural telcos' ability to compete.

VoIP remains tempting, yet many respondents remain on the sidelines. While only 3% of survey respondents currently offer VoIP service to their customers, an additional 71% indicated they intend to do so in the near future. These results are virtually identical to those obtained from last year's survey. Clearly, respondents are not quite ready to take the plunge into VoIP.

BPL is not considered a threat in the immediate future. In the 2004 survey, 64% of respondents considered BPL a serious to moderate threat to their operations. A year later, that number fell to 53%, and this year, to 43%. BPL has some significant obstacles that must be overcome before it can be considered a feasible solution for deploying broadband to rural areas; survey respondents are continuing to come to this realization.

More ILECs are offering video service. Largely in response to the increasingly serious challenge posed by cable companies offering voice service, 59% of survey respondents currently offer video service; an additional 25% plan to no later than year-end 2008. Forty-two percent offered video service according to the 2005 survey and 44% in 2004. As competitors continue to attempt to lure away customers by offering a wide variety of services, it will be increasingly important for ILECs to be able to match those offerings.

APPENDIX A

Q: What specific action(s) on the part of the FCC or state regulators would enable you to accelerate the pace of broadband deployment in your service area?

Decide intercarrier compensation to better plan for cost recovery

Programmers are a hassle with LECs trying to do IP video

Stability of USF and a more constant/trustworthy set of rules as they pertain to broadband.

Regulatory certainty

Firm up regulatory requirements and continue with USF recovery. Until I can see a recovery process that is long-term, I will be hesitant to push fiber any further.

ICC predictability

Ultimately define broadband's role as telecommunications or information and remove regulatory uncertainty

Long-term stability of USF

Permits from BLM is major problem. Excessive State costs for ROW is second, slow RUS release of funds is the third.

Lower NECA rates

No retransmission fees for local programming, and shared headends ok.

High expectation of earning on investment and recovering cost.

Adopting a universal service type directive, providing support dollars for high cost, low density areas

Acceleration on depreciation rates for fiber over copper. Clear direction from equipment vendors on future equipment.

Long-term stability of access recovery mechanisms and USF

Regulatory Certainty

PSC to relax their authority over us in obtaining financing - they believe broadband is a risky venture for independent phone companies

Provide USF support to broadband

Forbidding the practice of regional and national competitors of raising rates in areas where there is no competition so they can lower rates where they compete with us.

Forcing competitors to meet the same requirements as we have. Regulators also need to require payment from other carriers for use of our facilities no matter what type of technology they are using.

Equitable and comparable access to a POP

Certainty of continued (and added) support

Regulatory certainty

Cost recovery

We cover our service territory now.

Don't mess with USF and access and make all carriers pay

Definite plan for support mechanisms to evaluate risk.

Telecommunication reform that addresses E911, IPTV, and VOIP service that companies like Vonage can offer to our local loop facilities without paying access fees

Finish the access reform/USF reform process.

Determine future of USF and Intercarrier Competition. Quit subsidizing wireless competitors with USF funds based on our costs.

Regulations that assure we can recover our investments.

If the RUS grant process factored in cost of living differential, it would level the playing field for distribution of funds to non-served areas. Our member's high wages for the few jobs that are available in an otherwise subsistence lifestyle skews the data and ranks us too low to receive funding.

None
Regulatory Certainty and Stable Cost Recovery. Also a fixed and/or mobile wireless overbuild of a rural old and in need of an upgrade wireline plant area should be able to be included in the cost recovery mechanism.

We're capable of offering broadband throughout our service area and do not believe regulations impair our ability.

1) Remove uncertainty regarding universal service / cost recovery mechanisms 2) Incent broadband deployment through a broadband loop incentive.

Insuring the continuation of Universal Service for basic network infrastructure in rural areas and then possibly making USF available for broadband deployment would be the actions most likely to further enable our deployments. Without USF assistance for bringing basic services and infrastructure upgrades to our most rural customers, the chances of those customers ever being able to receive the kinds of speeds that they will soon be demanding (3 Mbps and above) are very slim.

We already are able to reach every subscriber in our exchanges with broadband.

Not sure anything required, we have excellent access to broadband just not the demand.

USF certainty and regulatory parity between providers

Subsidization of rural deployment

Develop Universal Service Fund policy that will provide the financial incentive to deploy affordable broadband technology to rural America. This will keep rural America competitive and allow all Americans to participate in the global economy.

Increase the contributions to the Universal Service Fund by assessing intrastate, interstate and international revenues and expanding the base of contributors over all service platforms that benefit from the ubiquitous telecommunications infrastructure. This will help the Universal Service Fund remain viable and the contribution requirement more technologically neutral.

A cap on the Universal Service Fund will not provide the proper incentive to invest in broadband infrastructure and technologies. The focus should be on accountability and oversight and not a cap of the Universal Service Fund.

Universal Service Fund support must be used to deploy and maintain telecommunications infrastructure and distributed based upon a provider's actual cost of service. Support must not be a voucher, auction, or block grant based.

Remove the ”parent trap” or ”safety valve” limitation on Universal Service Fund support (contained in Section 54.305 of the FCC’s rules). This will provide the incentive to invest in broadband infrastructure and technologies for historically underserved rural areas.

Financing

Total deregulation and/or a level playing field for all participants. We all live or die by the same rules.

Easier access to video content from programmer vendors

Stability and support in USF funding

Not allowing others to use our network, which costs millions of dollars annually to maintain, for free.

Shared Headend would allow us to hopefully recover some of our investment from other companies that want to take advantage of our investment.

Cost recovery on backhaul facilities

Hold harmless (for ILECs) resolution to Intercarrier Compensation and USF issues and get it done this year

To be able to use patronage capital to invest in non-regulated services - This is against the PSC rules - You would not have to tread lightly so that someone files a complaint

Assure us some stability as far as funding goes for rural ILECs.

Temporary non-pay disconnects can get expensive under NECA tariff. Fees should be waived if disconnection is less than 30 days.

Stabilize the regulatory environment so the industry can make “long” term plans

Decreased rates

Low cost broadband loans

Not allowing others to use our network, which costs millions of dollars annually to maintain, for free.

Keep USF in place

IP Video statewide franchise

Easier financing options

Bring down the cost of the N[etwork] I[nterface] D[evice]

Set Revenue Stability by Resolving ICC and USF

Regulate all service providers equally.

Continue and insure high speed USF support

Part of the federal or state pools in order to recover some of the extreme costs per customer in deployment

Accelerated depreciation of copper plant. Relief from competition.

Add Broadband as a universal service

Make broadband part of USF